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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	MM Docket No. 00-39
Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television	)	

COMMENTS OF USA BROADCASTING, INC.

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SUMMARY

USA Broadcasting, Inc. ("USAB") respectfully comments as to the *Notice of Proposed Rule Making*, which seeks to review and facilitate a smooth digital conversion process. During the conversion process, the Commission should seek to facilitate individual stations' transition to digital, rather than to establish additional regulatory requirements, which often will be too broad to take into account all the individual circumstances facing particular licensees.

Instead, the Commission should seek to encourage licensees to make those changes that would result in the best and most efficient use of digital television spectrum. USAB has identified several types of filings as meriting processing priority, either because of their relative ease of review, their fundamental importance to the principles of the DTV transition, or both. Specifically, the Commission should:

- give processing priority to filings that enable a station to better reach its existing audiences with its digital signal;
- give priority to applications attempting to co-locate an NTSC transmitter with a DTV transmitter (or vice versa), even if a trivial (fewer than five miles) short spacing would result;
- authorize applicants to place their digital antennas higher than their current specifications (without making their applications ineligible for checklist treatment) when necessary to comport with good engineering practice;
- allow minimal short spacing for digital applications that seek to move a transmitter within an antenna farm; and
- enable stations to locate their digital transmitters at the site best able to serve their markets, as long as they maintain quality service (41 dBu) to their community of license.

By so facilitating individual applications, rather than creating additional regulatory burdens (especially during a transition period that is sure to be rife with trial-and-error), the Commission will better expedite a successful and more efficient digital roll-out.

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COMMENTS OF USA BROADCASTING, INC.

USA Broadcasting, Inc. ("USAB"), pursuant to Section 1.415 of the Commission's Rules, respectfully submits these comments in response to the *Notice of Proposed Rule Making* in the above-captioned proceeding. 1/

I. DURING THE CONVERSION PROCESS, THE COMMISSION SHOULD SEEK TO FACILITATE INDIVIDUAL STATIONS' TRANSITION TO DIGITAL, RATHER THAN TO ESTABLISH ADDITIONAL REGULATORY REQUIREMENTS.

The ongoing digital conversion depends upon a Herculean attempt to renovate the nation's entire television infrastructure. In less than a decade, television licensees must attempt to duplicate the complex weave of facilities, towers, and audiences that took decades to create for their analog operations. Thusfar, the Commission has played an instrumental role, both in initiating this massive undertaking and establishing the general rules that would govern it. Now, however, is not the time for further extensive requirements or overbroad regulatory schemes. The sheer extent of the digital transition process demands that the Commission now exercise self-

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1/ *Notice of Proposed Rule Making, Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, MM Docket No. 00-39 (rel. March 8, 2000) (the "*Notice*").

restraint, limiting its intervention to that of a facilitator of the proposals of individual licensees.

Specifically, the Commission should be very reluctant to seek to control such a massive process through a myriad of inflexible regulations. There are simply too many interacting and unique details – from the peculiarities of the local terrain or local atmospheric effects to ongoing technical changes by other broadcasters to the shifting nature of local population centers to whether and where tower sites or antenna slots are available – for the Commission to attempt to limit the ability of individual licensees to maximize the efficiency of their digital (or, through the transition period, analog) broadcasts through necessarily overbroad requirements. Nor should the Commission want to do so: a transition to digital on a rapid timetable is difficult enough for the Commission and licensees without requiring a host of waiver applications of new and untested rules, many of which will be unable to account for the peculiarities of actual circumstance.

Instead, the Commission should seek to encourage licensees to make those minor modifications that would result in the best and most efficient use of digital television spectrum. Accordingly, the Commission should identify several types of filings as meriting processing priority, either because of their relative ease of review, their fundamental importance to the principles of the DTV transition, or both. Specifically, the Commission should:

- give processing priority to applications or petitions that enable a station to better reach its existing audiences with its DTV signal;
- give processing priority to applications attempting to co-locate an NTSC transmitter with a DTV transmitter (or

vice versa), even if a trivial (fewer than five miles) short spacing would result;

- authorize applicants to place their digital antennas higher than their current specifications (without making their applications ineligible for checklist treatment) when necessary to comport with good engineering practice;

- allow minimal short spacing for digital television applications that simply seek to move a transmitter to a different point within the same antenna farm; and

- enable stations to locate their digital transmitters at the site best able to serve the markets in which they are located, as long as they maintain a reasonable level of service (41 dBu) to their community of license.

II. THE COMMISSION SHOULD FACILITATE A SMOOTH DIGITAL TRANSITION BY EXPEDITING APPLICATIONS OR PETITIONS THAT WILL ENABLE DIGITAL STATIONS TO REACH THEIR EXISTING ANALOG AUDIENCES OR THAT PROPOSE ONLY MINIMAL CHANGES.

In the *Notice*, the Commission requested comment as to what types of applications deserve processing priority, either among DTV applications or among DTV and NTSC applications. 2/ USAB would urge the Commission to give priority at least to the following types of applications:

- applications that enable an existing licensee to better replicate its analog coverage with its digital signal; and

- applications that enable an existing licensee to broadcast its digital signal most efficiently and effectively, even if the change would result in a trivial short-spacing or relatively small changes in authorized antenna height.

2/ *Id.* at ¶ 40.

A. The Commission Must Enable Licensees to Modify Their Digital Parameters to Reach Their Existing Audiences.

The drafting of the Commission's Table of DTV Allotments was a huge undertaking. It involved a computer-generated analysis of thousands of television stations in hundreds of different markets over thousands of miles of varying terrain and involving millions of different viewer households. Such an undertaking understandably defied detailed human review: it simply was too massive of a project to enable individual Commission engineers to check whether each DTV allotment would result in the optimal real-world approach in any individual case.

However, the Commission now can facilitate each licensee's individual efforts to ensure that a particular DTV allotment comports with the reality of its established audiences and operational circumstances. In many cases, the proposed changes are likely to be mere minor modifications – such as a change in beam tilt so the station's signal is better directed to actual population centers. In such cases – where the proposed change would cause the resulting DTV signal to better reach the station's existing analog audiences – the Commission should speed its review and grant of such a modification application or petition for channel change.

Such a priority advances one of the Commission's fundamental motivations guiding the DTV Table of Allotments: that individual stations' digital parameters should allow them to "replicate the service areas of their existing NTSC operations." 3/ This principle makes sense: a station should not be forced to re-direct its broadcast signal away from an established audience -- an audience that may not

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3/ Second Memorandum Opinion & Order, *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, MM Docket No. 87-268, at ¶ 4 (Dec. 18, 1998).

understand the Commission's technical reasoning but will know that it can no longer view certain programming at a certain time – to other areas simply because of a computer-generated DTV Table. After all, a station's digital signal is intended to be that station's signal into the indefinite future: the Commission should use the transition period as an opportunity to ensure that a station's present audience at least has the chance to choose to become that station's digital audience as well. Likewise, a station will be far better able to sell a rapid transition to digital if it can ensure its advertisers and viewers that the change will not result in a significant loss in the station's audience.

None of these reasons are new to this proceeding. Each was a basis for the Commission's decision to use service replication as a key principle underlying its DTV Table. 4/ But such reasoning becomes even more critical when the computer-generated DTV Table of Allotments collides with the reality of constructing individual digital facilities. For example, the terrain in the Los Angeles Basin poses unique coverage issues that likely could not be accommodated by the algorithms of a general computer program. At least one digital allotment in that market would cause the signal – which ostensibly is to serve a large area of the Basin – to be beamed directly into a mountain range. Such misalignment with the Basin's real conditions would result in poor coverage of the market to which the DTV station is licensed as well as potentially creating self-interference or shadowing.

Accordingly, the Commission should give processing priority to future modification applications or petitions for channel changes when the applicant is able to

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4/ *See, e.g., Sixth Report and Order, Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, MM Docket No. 87-268, at ¶ 90 (rel. April 21, 1997).

show that the proposed change better replicates its existing coverage area and population than its current specifications. Also, the Commission should be prepared to waive minor short spacing or minor interference (even if it should exceed the total interference cap articulated by the Commission) when such an application demonstrates that the existing DTV allotment would cause the applicant to be technically unable to serve a significant fraction of its existing potential audience. 5/

B. The Commission Also Should Give Priority to DTV Minor Change Applications That Seek to Ensure More Efficient Digital Service, Including Minor Changes to Antenna Height and Transmitter Site.

A second principle underlying the digital transition process is that it requires an almost entirely renovated television infrastructure. It demands new towers and new antenna slots, new transmitters and transmission lines, new mechanical loading estimates and new wind-shear projections. It demands that nearly all licensees re-build their transmission facilities from the ground up, and that many re-arrange existing operating procedures.

Such upheaval offers a singular opportunity for the Commission to authorize licensees to employ the best possible engineering – engineering that will result in the most efficient use of broadcast spectrum – with regard to new digital facilities. In some cases, such engineering may result in minimal short-spacings, but the real-world gains of such proposals should outweigh any actual harm.

Moreover, such a "best engineering" approach would appear only possible and, for that matter, only justified during the unique period of the digital television

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5/ Of course, this priority would not require stations to conform their digital contours to their analog ones. Such detailed technical decisions are best left to each individual

transition. First, during this unique time, all television applicants have a common opportunity – indeed, obligation -- to re-appraise their broadcast efficiency. Second, all licensees face a similar need to develop brand-new transmission facilities, which ensure that all licensees have a chance to take advantage of a Commission policy to endorse "best engineering" on a case-by-case basis. Third, the incredible burdens that the digital transition is placing on available towers and tower sites should compel the Commission to encourage engineering ingenuity so as to ensure the most efficient digital transmission possible. Fourth and finally, by granting television licensees flexibility in their implementation of digital operations, the Commission will enable existing licensees to transform the undeniable burdens of the transition period into a bonafide opportunity for more effective and more efficient digital transmissions, both during the transition period and beyond.

USAB has identified three types of applications that are consistent with the real need for the Commission to process and prioritize attempts to attain more efficient digital television operations:

- applications that seek to co-locate an NTSC transmitter with the same station's DTV transmitter (or vice versa), even if a minimal short spacing (fewer than five miles) or minimal additional interference (no more than a few percent) would result ("Co-Location Applications");
- applications that seek to re-locate a DTV transmitter to a different location within the station's (or allotment's) existing antenna farm, even if a minimal short spacing (fewer than five miles) or minimal additional interference (no more than a few percent) would result ("Antenna Farm Applications"); and

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station. However, such a priority would help to ensure that stations are not *regulatorily obligated* to abandon established viewers.

- applications that seek to increase the antenna height of a digital station by no more than 200 feet above its current parameters ("Height Change Applications").

The efficiencies and operating benefits of the first category of applications -- Co-Location Applications -- are self-evident. From the applicant's perspective, the use of a common transmission site for its digital and analog facilities would enable it to focus its technical, maintenance and safety efforts on a single location, as opposed to dividing its attention between multiple sites. It also likely would reduce interference to the applicant's digital and/or analog signals, to the benefit of the station's viewers. From the perspective of other broadcasters (and the tower owner(s)), a Co-Location Application promises the benefits of fewer transmission lines and easier coordination between parties on the tower – a particularly useful item during the upheaval of the digital transition and resulting tower shortages. In some cases, co-location also may enable the use of a "dual" antenna, with a station's digital and analog signals emanating from a single antenna slot, which increases the efficiency of the tower. All are real benefits, which collectively justify the occasional minor short-spacing that may result from such co-location.

The second priority category -- Antenna Farm Applications – results from the principle that the Commission should not be required to micro-manage the operations of an antenna farm. 6/ Antenna farms, a concept very familiar to the Commission, serve the public interest by grouping many transmission facilities in one limited area. During the digital transition, antenna farms are being forced to respond to many competing demands by television licensees needing a new antenna slot for their

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6/ *See, e.g.*, 47 C.F.R. § 17.9.

digital facilities, while at the same time facing increasing challenges before local zoning authorities. The Commission should ease the burden on such farms – and on broadcast licensees – by offering them some flexibility as to which antennas are regulatorily required to go where. By enabling licensees to move quickly from one tower to another within the same farm, the Commission will limit the burden the digital transition will place on such farms, and will allow licensees to locate their facilities on the best tower available for their purposes within the farm.

Finally, the Height Change Application priority responds to a simple truth of engineering: the higher the operating frequency of a station's transmitting antenna, the smaller the antenna's cross-sectional area. Accordingly, a UHF antenna should be placed above a VHF antenna to maximize efficiency. In light of this, and other factors like mechanical loading and electrical diffraction which largely govern antenna location decisions in the real world, the Commission should enable a licensee to file a "checklist" application even though its antenna is up to 150 feet from its allotted height. 7/

III. THE COMMISSION SHOULD NOT FRUSTRATE ATTEMPTS TO PROVIDE ENHANCED TELEVISION SERVICE BY ADDING ADDITIONAL REPLICATION REQUIREMENTS.

In the *Notice*, the Commission raised three basic concerns underlying its proposals on replication – whether contour or community of license based -- requirements: 1) it does not want the transition to digital to disrupt a station's service to its community of license; 2) it does not want to endorse a *de facto* reallotment toward more densely populated areas; and 3) it does not want DTV licensees to warehouse

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7/ Such a change may seem large on its face, but compared to the height of the mountain, building or tower on which such antennas typically are located, a change of 150 feet is hardly critical.

spectrum needlessly. 8/ Accordingly, the Commission has proposed to phase in a replication requirement by a date certain, or by the end of the transition period, whenever it comes, for each television market, after which time only a station's actual contours – not allotted contours – would receive spectrum protection. 9/

USAB understands the need to protect existing viewers and to ensure the best use of the broadcast spectrum. That said, USAB would caution the Commission against premature elimination of allotted contour protection. Digital television is still a new technology, and its implementation requires substantial upfront investment. Preservation of the allotted contour, for purposes of technical protection, provides some measure of comfort that a station may adapt its facilities as its viewers learn to accept digital television. The Commission should not deny existing licensees a full and fair opportunity to determine what digital signal pattern makes the most sense for their viewers through an untimely termination of allotted-contour protection, especially in light of the necessarily hurried nature of many initial digital television applications.

USAB could support the elimination of protection beyond the station's actual digital contours, but only at a reasonable point after the official end of the DTV transition period in a particular market. Of course, any such deadline should give licensees sufficient time to evaluate then-existing coverage as well as perform the necessary (and sometimes lengthy) engineering studies required to make final adjustments in power and height of digital facilities after the vacating of all relevant towers by NTSC antennas. Such a definitive timeline would advance the public interest

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8/ *See Notice* at ¶ 20.

9/ *Id.* at ¶ 26.

by ensuring every existing licensee in a particular market an opportunity fully to develop its digital operations in light of the market's conditions following the digital transition process.

In contrast, any other type of higher service or contour-replication standard for digital television stations should not be at issue in this proceeding. The Commission already has determined any UHF signal in excess of 41 dBu provides sufficient digital transmission quality. 10/ Accordingly, many licensees have relied on this standard (or other relevant standards set forth in Section 73.622(e)) in preparing their permit applications and their digital business plans. It would neither be equitable nor technically sensible to increase the standard with regard to existing stations now given that, as the *Notice* emphasizes, many stations have begun construction of their digital facility. 11/

Nor should the Commission be concerned that such a proposal would result in detrimental loss in coverage. All existing stations have significant incentives to ensure that the viewers most familiar with their analog programming retain quality access to the digital version of that programming. Moreover, the guarantee that all stations will lose allotment-contour interference protection at a fixed time after the digital transition process is complete provides adequate assurance that no station will operate permanently at a substandard level.

10/ *See, e.g.*, 47 C.F.R. § 73.622(e)(1).

11/ *See Notice* at ¶ 5. Of course, to the extent necessary, the Commission may consider whether it should elevate such standards for new digital television applications that are filed after 2003.

Finally, in addition to these clear incentives for stations to ensure quality service to their home audience and their markets as whole, all stations remain subject to their fundamental obligation to serve their communities of license. If a station's service to its home community is insufficient following the transition to digital, the station owner would risk its license. Such a penalty is itself a deterrent sufficient to render unnecessary additional replication requirements for existing stations.

CONCLUSION

For all the foregoing reasons, USAB respectfully requests that the Commission facilitate digital roll-out and an efficient television service through the policies described.

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May 17, 2000